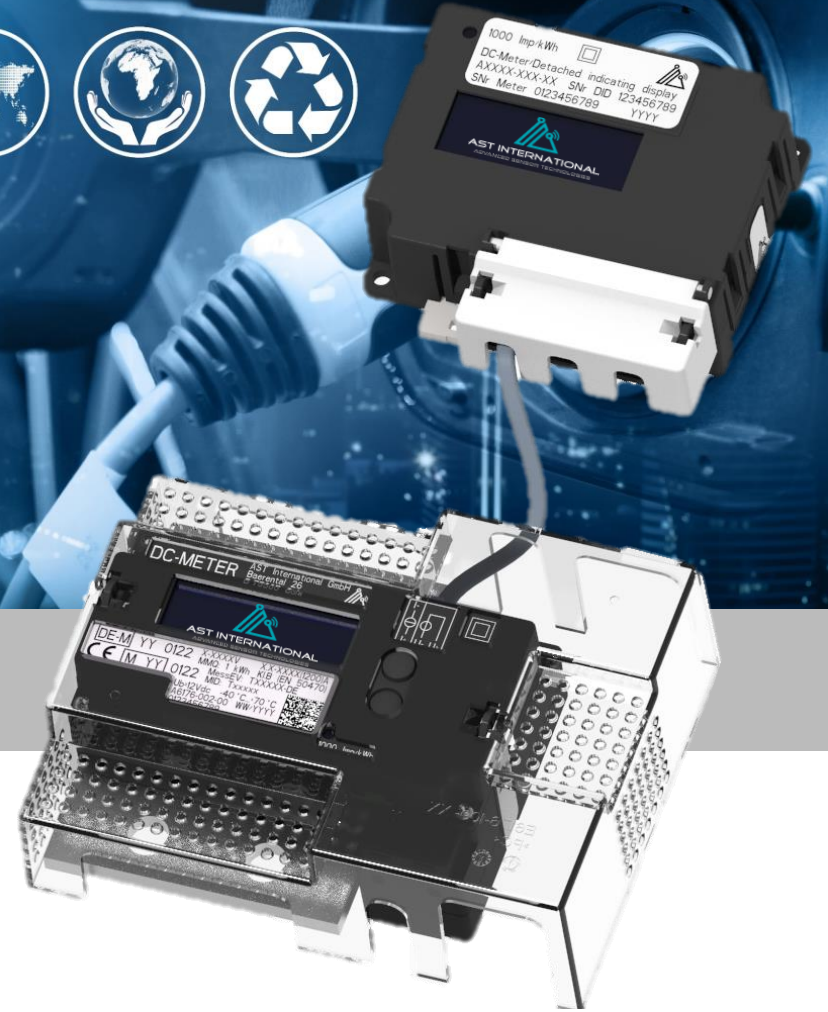




AST DC-Meter



AST INTERNATIONAL
ADVANCED SENSOR TECHNOLOGIES

© 2024 – AST (Advanced Sensor Technologies) International GmbH

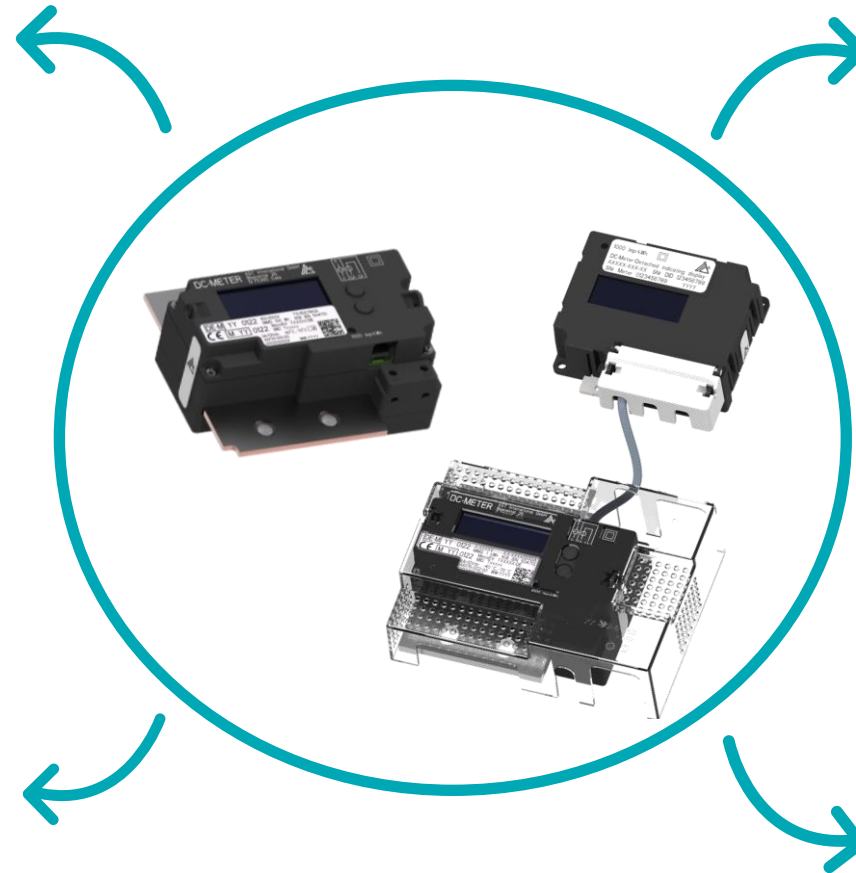
Contents and presentations are protected world-wide. Any kind of using, copying etc. is prohibited without prior permission. All rights – incl. industrial property rights – are reserved

Communication protocol

- Transparent billing according to OCMF protocol
- Compatible with S.A.F.E. transparency software
- Acc. WELMEC 7.2 Software Guide

Design

- Compact DC-Meter
- DC-Meter with a detached display (up to 3m cable length)
- Continuous high current and voltage measurement up to 1500A and 1000V
- bi-directional DC-Meter
- retrofit: designed to replace existing solutions



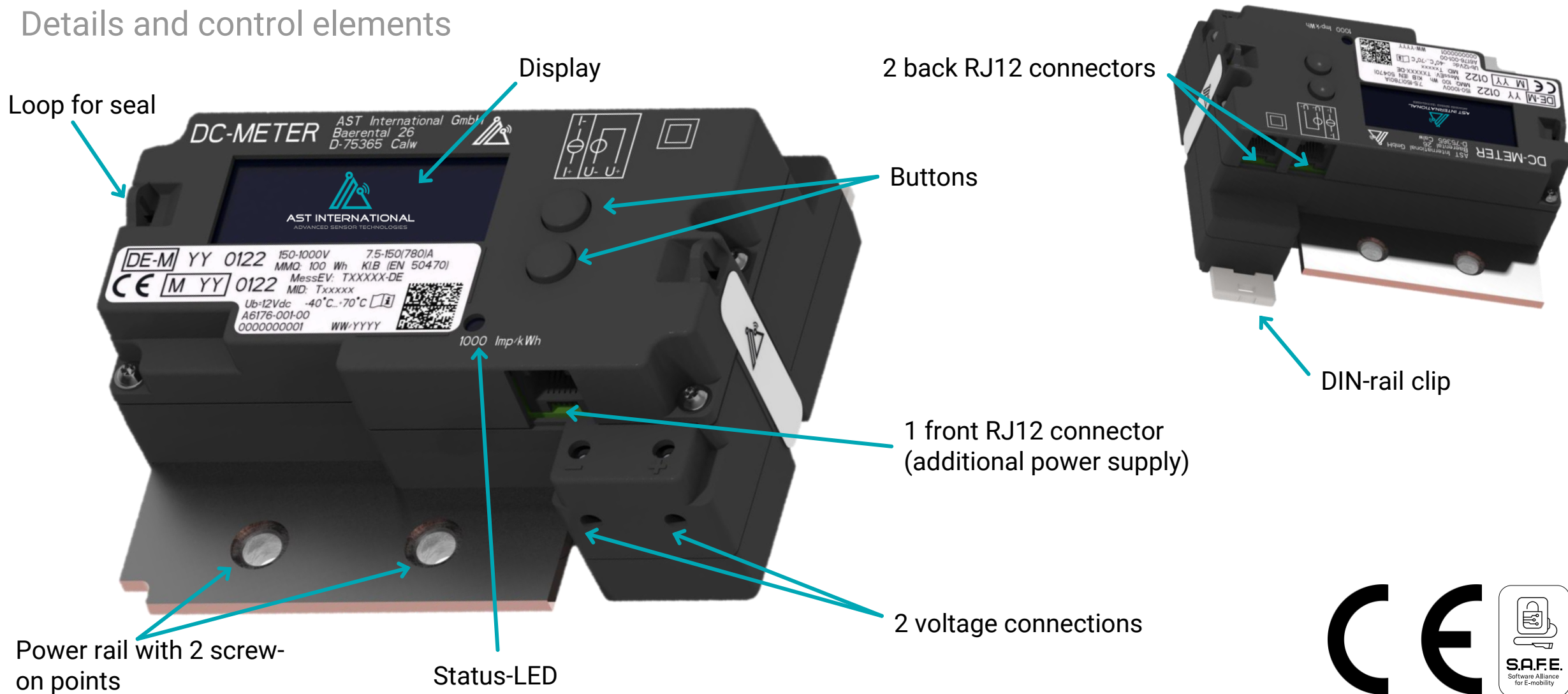
IoT

- Communication supporting Ethernet and RS485
- Backlighted LCD display (legal data and energy)
- NTP (Network Time Protocol)

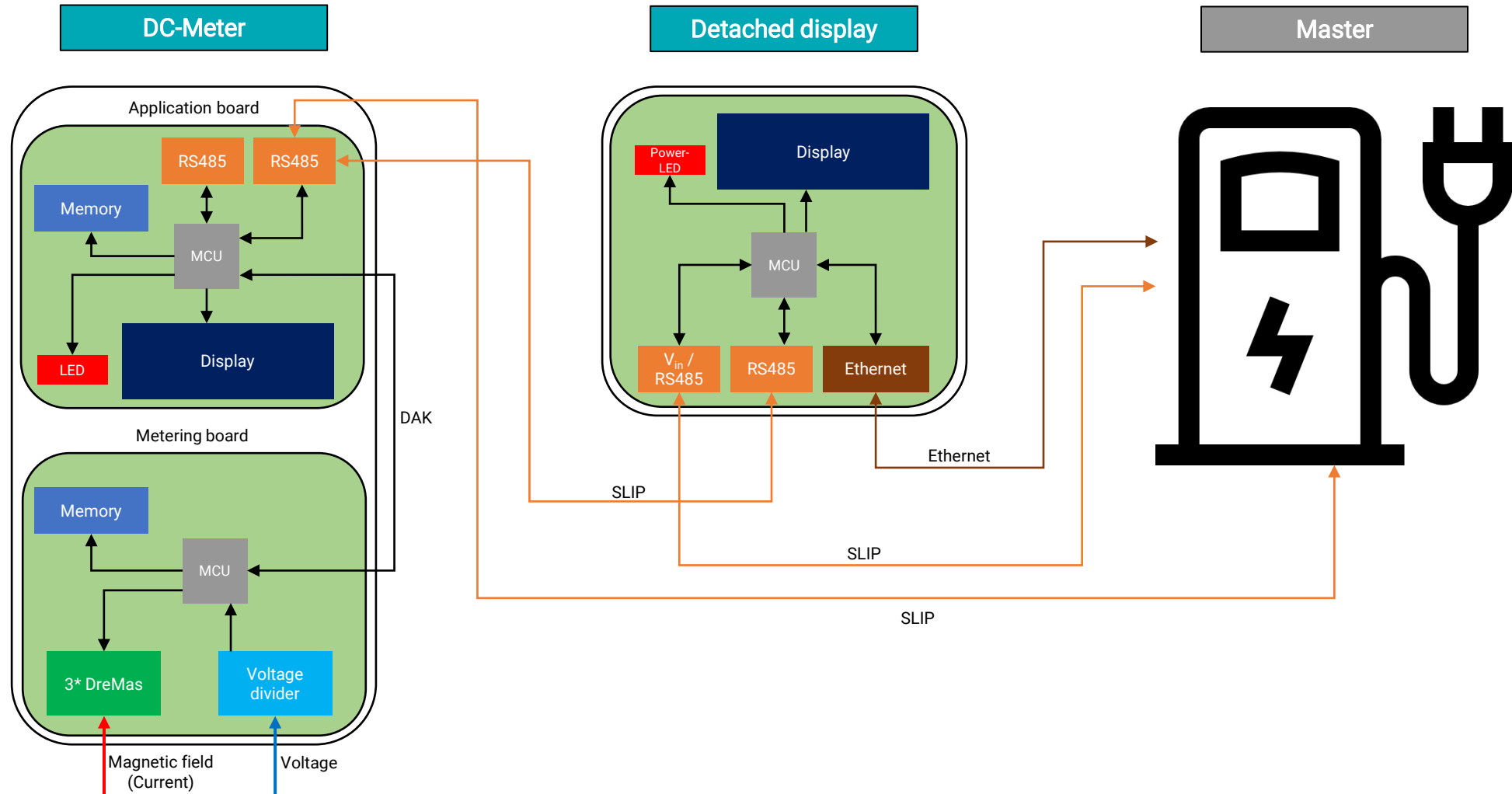
International Metering Standards

- Complies with the German Eichrecht, MID, UL and French calibration law
- EN 50470-4, IEC 62053-41
- IEC 62052-11:2020, IEC 62052-31 (Safety)
- UL 61010-1, UL 61010-2-030
- Décision ministerielle 01-03-2022

Details and control elements



System overview



Market needs

🔧 Continuous current and voltage measurement for DC wallboxes, fast & ultra charging stations as well as Megawatt Charging Systems.

- 🔧 High current up to 250A, 780A or 1500A
- 🔧 High voltage up to 1000V



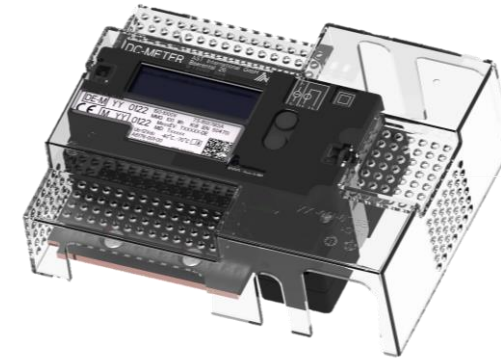
- 🔧 DC-Meter conformity - certification according to
 - 🔧 German Eichrecht (Module B and Module D certified)
 - 🔧 MID
 - 🔧 UL compliance
 - 🔧 French calibration law (Décision n° 22.00.570.001.1)
- 🔧 4-wire-measurement or software based cable compensation
- 🔧 Compact DC-Meter or variant with a detached display
- 🔧 Bi-directional energy measurement

AST DC-Meter – product overview

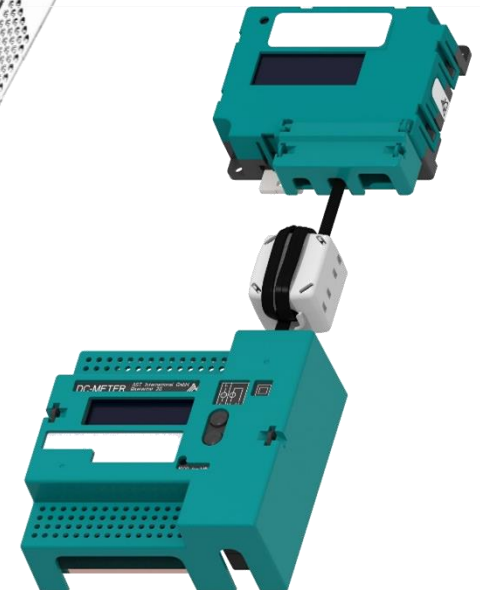
DC200		DC650		DC1500	
Current measurement					
I_n	= 50A	I_n	= 150A	I_n	= 300A
I_{min}	= 2A	I_{min}	= 5A	I_{min}	= 10A
I_{tr}	= 5A	I_{tr}	= 15A	I_{tr}	= 30A
I_{max}	= 250A	I_{max}	= 780A	I_{max}	= 1500A
I_{st}	= 0.2A	I_{st}	= 0.6A	I_{st}	= 1.2A
Voltage measurement					
U_n	= 1000V	U_n	= 1000V	U_n	= 1000V
U_{min}	= 150V	U_{min}	= 150V	U_{min}	= 150V
Accuracy class					
<ul style="list-style-type: none"> Class B, MID (according to 2014/32/EU of the EUROPEAN PARLIAMENT AND COUNCIL, attachment V, MI-003) Class 1, IEC 62053-41:2021 		<ul style="list-style-type: none"> Class B, MID (according to 2014/32/EU of the EUROPEAN PARLIAMENT AND COUNCIL, attachment V, MI-003) Class 1, IEC 62053-41:2021 		<ul style="list-style-type: none"> Class B, MID (according to 2014/32/EU of the EUROPEAN PARLIAMENT AND COUNCIL, attachment V, MI-003) Class 1, IEC 62053-41:2021 	

All available in following design variations:

Compact Version



Detached Display Version

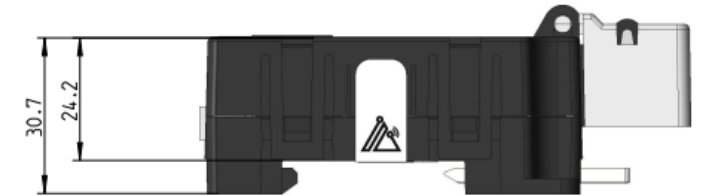
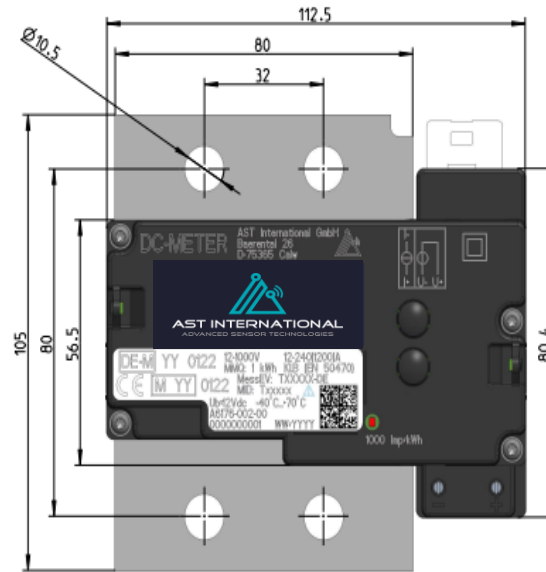
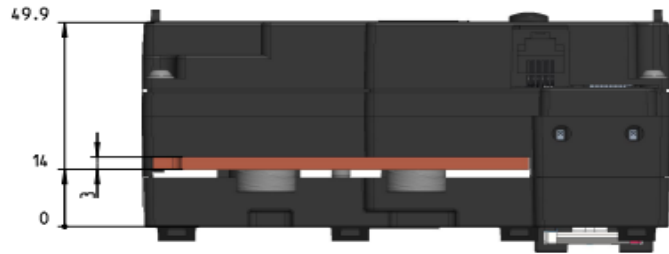


Dimensions DC200 / DC650 / DC1500

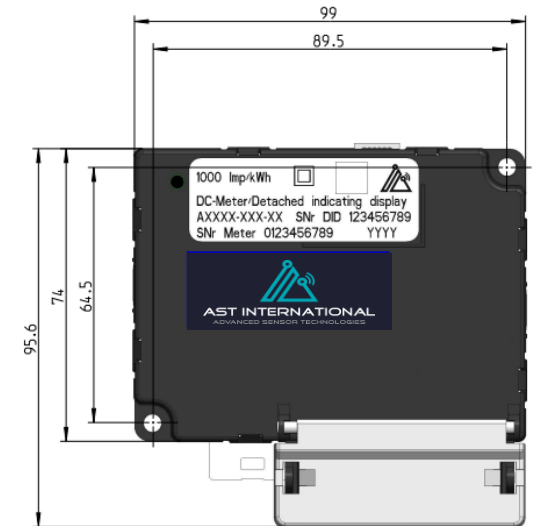
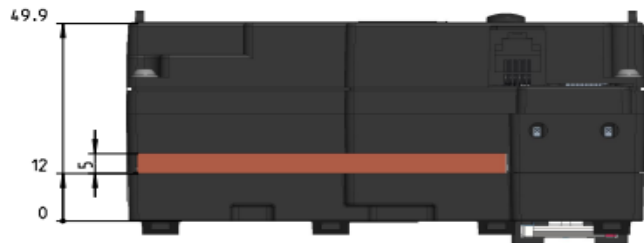
Sensor Unit

Meter Unit

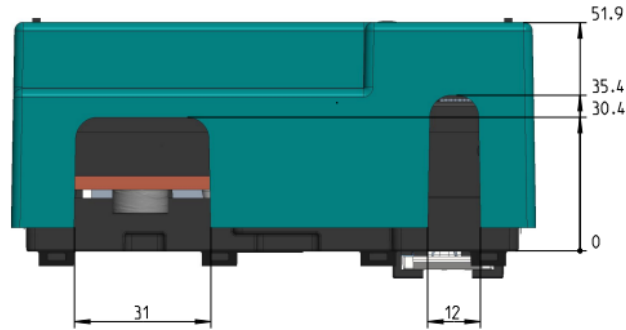
DC200/DC650



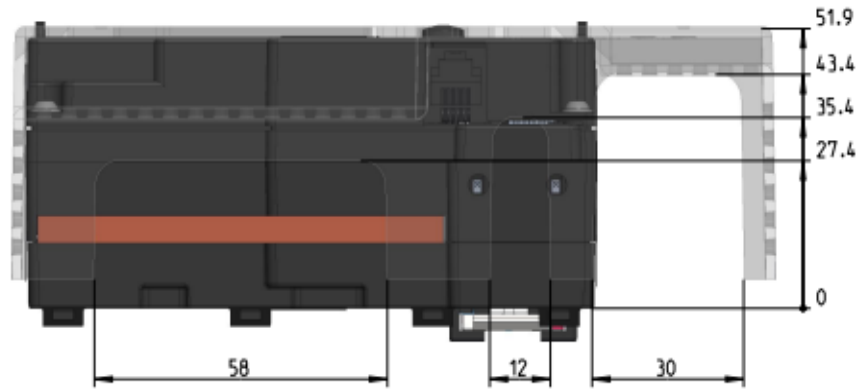
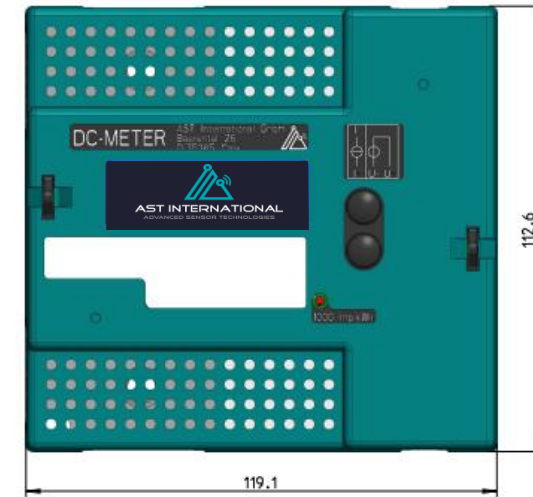
DC1500



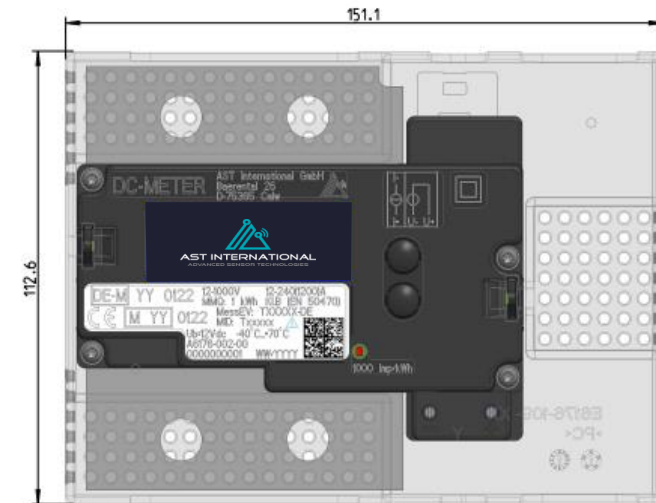
Dimensions **with** housing DC200 / DC650



Small Housing



Wide Housing



Key features

- ▶ Compact and robust design
- ▶ Bi-directional meter
- ▶ EN 50470-4, IEC 62053-41:2021
- ▶ IEC 62052-11:2020, IEC 62052-31 (Safety)
- ▶ UL 61010-1, UL 61010-2-030
- ▶ Charging cable resistance compensation or 4-wire-measurement
- ▶ Supply Voltage: 12V (compact version) / 24V (detached display)
- ▶ Operating temperature range: -40°C to +80°C
- ▶ Instantaneous data provided (current, voltage, temperature)
- ▶ Communication via **Ethernet** or **RS485**
- ▶ Encapsulated with **OCMF protocol** (S.A.F.E. transparency software) and signed data
- ▶ Rated insulated voltage at 1000V DC
- ▶ Production site approved acc. to **Module D** (German Eichrecht, MID)

Description

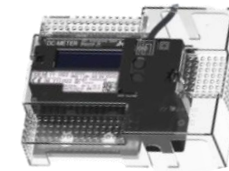
- ▶ **Meter Unit:** interface between the charging station (via Ethernet or RS485) and sensor unit as well as presenting the measuring data to the client.



- ▶ **Cable:** transmits data from the sensor unit to the meter unit. Capable to reach length up to 3 meters.



- ▶ **Sensor Unit:** measures the current and voltage. The calculated kWh are transmitted to the meter unit.





AST INTERNATIONAL
ADVANCED SENSOR TECHNOLOGIES

INTELLIGENT SENSORS. ADVANCED SOLUTIONS.



✉ sales@ast-international.com

☎ +49 (7051) 6001-0

